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AUGUST, 1882.

THE PAST SPRING, which opened early in all parts of the country, was attended during May and June with a low temperature and much rain up to the first of July, and even later; the season was ten days behind that of the year before. This state of affairs was quite general in the northern part of the country. The weather was favorable to many kinds of vegetables on well improved grounds. Underdrained lands that quickly disposed of the water from the heavy rains brought on Peas, Cabbage, Cauliflower, Beets and other root vegetables well, really suiting them better than the very warm weather we frequently experience in spring. The very tender or semi-tropical vegetables, Tomatoes, Egg Plants, Peppers, Melons, Cucumbers and others were considerably delayed; most of them, however, the good gardener has in control so that they can be pretty well assured. But poor gardening has been at a sad discount; undrained grounds have suffered severely, everything almost on them being backward, poor and diseased. There never could have been a better season to show the immense advantage of good over poor cultivation. The herbaceous perennial flowering plants particularly rejoiced in the lengthened cool season, it being exactly adapted to their wants. They made a remarkably fine growth and the season of bloom was greatly extended.

A great many varieties of these plants should receive much more attention than is generally bestowed on them. The Peonies were unusually productive and handsome, though quite late. Roses were nearly or quite two weeks beyond their usual season of bloom, but were very fine; the show of Roses here on the nursery grounds the last week in June and first two weeks in July was magnificent. The weather at the time of the early blooming of Roses is often very warm with an arid atmosphere, withering the blooms very soon after opening, but the past spring it was all that could have been desired for them; only our patience was somewhat tested by their long delay.

Apples bloomed late in this region, unattended by late frosts, though in the West they were considerably damaged in that way. The bloom was abundant, but owing to succeeding cold and wet weather, but a small amount of fruit set, or at least, remained long; the Codling moth has occasioned a still further loss, and at the best the crop will be but a fair one, though very general. A large crop of Apples was anticipated this season, as this is the bearing year. If the season should be favorable next spring, it is not improbable that we may have a heavy crop next year; if so, the bearing year will be changed. As most orchards were barren last year, and this year carry only

a medium crop, they will be in a vigorous condition next year, and capable of producing heavily.

Thus, possibly we shall have demonstrated before our eyes how potent and how extended are the influences that affect the fruitage of our orchards and determine the bearing years. The attempt to regulate orchard crops so as to make them annual, is by all means to be approved, and unquestionably a skilful control may be exercised that will ensure a better produce and a more regular one. The most frequent and usually immediate cause of non-productiveness on alternate years is the over-cropping of the preceding year; but, as we see at the present time, unfavorable weather induces the alternation by its occasional imperative mandates. Removing a large portion of the young fruit when trees are heavily set, the destruction of the Codling moth by London Purple or Paris Green, as is now successfully practiced, maintaining the fertility of the orchard by proper attention to manuring, will ensure larger, fairer fruit, and its more frequent production that is now obtained by the *laissez-faire* method that is prevalent. But great meteorological influences will at times frustrate all our efforts;

"The best laid schemes o' mice and men
Gang aft agley."

Only a very few years since, a region in Western New York, extending not much beyond the boundaries of a single county, was visited by a severe frost just as the young Apples were setting, and they were totally destroyed. This was a great Apple year generally; the crop throughout the country was large, and prices of the best varieties ruled low. The next year, when few Apples were produced elsewhere, the orchards that were so rudely visited the year before bore a great crop that was marketed at a high price.

In some parts of this country an Aphis or aphid-like insect has done considerable damage to Apple orchards, rearing its broods upon the leaves and obtaining nourishment from them, eventually causing the death of the leaves visited. Kerosene oil, a table-spoonful to a gallon of water, mixed with milk, or soap, and thrown upon the trees through a rose with a hand force-pump, or by a syringe, has been effectual in destroying the in-

sects. Weak Tobacco-water has also been used with good effect.

The summer fruits have been produced in fair supply, the crops of vegetables are good, the grain crop, with the exception of corn in some regions, is abundant; the southern crop, cotton, notwithstanding great damages in some places, is a large one, and in regard to the country at large, we may look forward to a plentiful harvest.

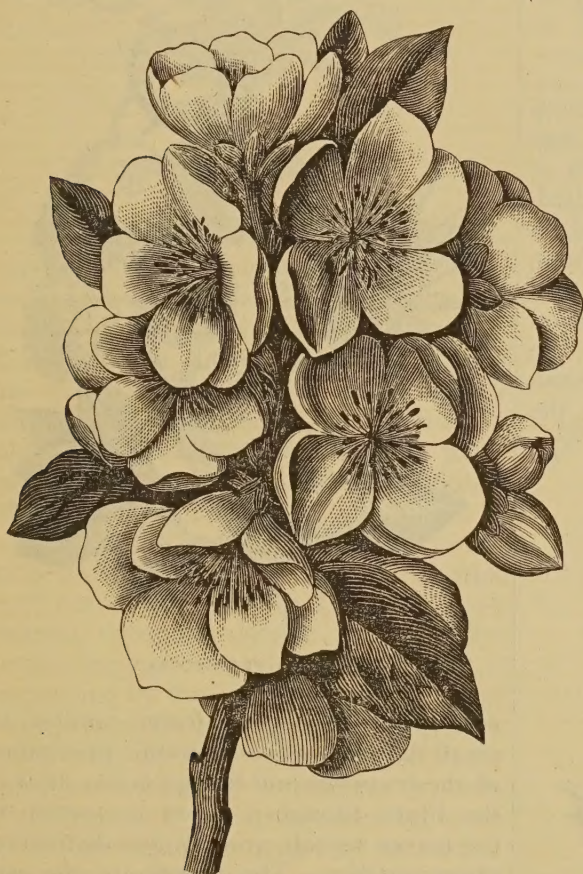
CHINESE HIBISCUS.

Those of our readers who are familiar with the Chinese Hibiscus will be sure to be pleased with the faithful representation of it at this time, since it is a plant that is always fresh and handsome; and those unacquainted with it may here see how showy and beautiful it is. It is a woody plant, blooming in the greenhouse in winter. Bedded out in the spring in the garden, it makes an ample growth and produces its flowers through the summer. The Chinese Hibiscus is known as *Hibiscus Rosa Sinensis*. No doubt, from its prevalence, the typical color must be considered a crimson, but the sports from it are numerous; in fact, it is one of the most unstable of flowers; its equilibrium is so poorly poised that it would be difficult to have a plant in one's possession long without noticing some departure from the simple single form by an increase of petals or by a change of color.

At the upper left hand corner of the plate is seen a specimen of a semi-double variety, some petal-like bodies being produced on the staminal tube by the reversion or conversion of stamens, or more properly, the filaments; this variety is known as *H. miniatus flore pleno*. The other upper flower is called *fulgidus*, and the lighter one below is *grandiflora*, while the white one with the pink tinge is *Dennisoni*. There are quite a number of other varieties in the trade, some more or less double, and some with various shades of yellow and salmon. It is doubtful if any of them are entitled to rank more than as mere varieties of the Chinese Hibiscus. All are interesting, attractive, and easily raised. Equal parts of good fresh loam and leaf-mold, with a little sand, forms a suitable soil for them; to this may be added manure, liquid or otherwise, as the plants may require.

FLOWERING SHRUBS.

One of the most distinct and beautiful of hardy shrubs is the Japan Quince. Its clean, smooth foliage makes it always attractive, but when in bloom in early spring, it is a showy and admirable plant. The variety with bright scarlet flowers is now very well-known and widely disseminated; besides this there are others with flowers of different shades of color, and one that is nearly white. A variety known as *umbilicata* is particularly desirable on account of the handsome deep rose color of the flowers, and the



JAPAN QUINCE—FLOWERS.

great abundance of its bloom. This variety bears freely, and the fruits which are from an inch and a half to two inches in diameter, are of a yellowish color shaded with purple, and have the odor of the Violet. The flowers of all these species are when expanded nearly an inch and a quarter across. There are still other varieties and all of them are fine. A collection or group of these shrubs is very effective in the blooming season.

The Japan Quince varies somewhat in the form the bush assumes, but it is al-

ways low-headed and compact; sometimes it is somewhat erect, throwing out its branches only after they have risen for some distance near the main stem, thus giving it a vasiform appearance; usually the branches start out at a pretty wide angle, and with age nearly or quite touch the ground, forming a large, low-topped, round-headed shrub. The flowers are produced just as the leaves begin to push, or even a little before. This shrub, on account of its positive outline, appears well standing alone on the lawn, and it is also valuable to place on the outer or front line of shrubbery, or a clump of taller growing plants.

Among the early-blooming shrubs must be noticed the double-flowering, Plum-leaved *Spiræa*, *Spiræa prunifolia flore pleno*, as it is very showy just at the time the foliage begins to start. Its little rosettes of white, double flowers completely cover and surround the branches, suggesting very properly the name, Bridal Wreath, that has been bestowed on it. This plant may almost be said to be formless, but it always has an upright stem with many long, flexible branches, giving it an indefinite outline; consequently, it usually appears to best advantage when properly grouped with other shrubs. *Spiræa Thunbergii* is another of the very early ones, with fine, delicate foliage; it is hardy and very desirable. As the *Spiræas* in their different varieties produce flowers nearly all summer, it is not within the scope of our present purpose to consider many of them now, since our object is to notice only some of those that flower very early. In quick succession after the Bridal Wreath, and while it is yet in its

glory, the Lance-leaved *Spirea*, or *Spiræa lanceolata*, comes out, and, also, at the same time, the double form of the same plant, *Spiræa lanceolata flore pleno*. These shrubs cannot be dispensed with, even on small grounds. The shrubs themselves are beautiful and the flowers are particularly valuable for cutting for bouquets and vases; indeed, they are so much prized for their pure white flowers as to be very commonly employed as plants for forcing.

A valuable, hardy, little shrub, origin-

ally from China, that has not yet found its way into many gardens in this country, is *Prunus triloba*; at least, it is known by this name among florists, and the name



JAPAN QUINCE.

was bestowed by Dr. LINDLEY; but, even as many other names are given, so was this one when very little was known of the recipient to which it was attached. Afterwards, when the plant produced its fruit in the Jardin des Plantes at Paris, it was discovered that it was not a true *Prunus*, or Plum, and then it received the name *Amygdalopsis Lindleyi*; the generic name meaning like an Almond, and the specific name in honor of the



AMYGDALOPSIS LINDLEYI.

celebrated doctor who had mistaken the proper family origin of the waif. Still, the original name, *Prunus triloba*, is so associated with it among horticulturists, that it will be difficult to supersede it in the trade by the later and longer cognomen.

This plant was first introduced into England from China in 1856, by the celebrated horticultural traveler and collector, ROBERT FORTUNE. The plant is a branching shrub of erect form; it is very hardy and vigorous, but of comparatively slow growth. It comes into bloom at the time of the Japan Quince, and before it has pushed its foliage. The flowers are of a soft rose color, semi-double, from an inch to an inch and a quarter in diameter, appearing like little roses growing closely along the branches, literally covering them and concealing them from view. The flowers are suc-



SPIRÆA PRUNIFOLIA.

ceeded by numerous fruits, similar to small Almonds. The general appearance of the branches and foliage is like that of the Plum, though a closer inspection of the leaves reveals peculiar and distinctive characteristics. The plants are successfully propagated by budding on Plum stocks. We cannot too highly recommend this handsome shrub for the lawn or the garden, knowing that it will secure admirers wherever it is seen.

The Japan Quince, the *Spiræa* noticed, and the *Amygdalopsis* are in bloom at the same time, and we cannot fail to notice that they are all members of the great Rose family. Other members of this family are also displaying their beauty at this time, as, for instance, the dwarf-flowering Almond, the Peach, the Plum and the Cherry, with their double flower-

ing and ornamental varieties; before these have shed their bloom, the Apple graces every landscape. What can compare with it for simple beauty!



PRUNUS PADUS.

All of these trees and shrubs bloom early for the reason that their flower buds are formed the year before, but it is a month later, and even more sometimes, that the Rose itself comes out, after it has made its first growth and produced its buds. Among the natural divisions of plants, what one is so rich in floral gems as the Rose family, what one so prodigal of useful, luscious fruits?

Lengthening out the season, there appear in bloom a little later the Thorns, both native and exotic. These are well-shaped, compact shrubs, or low trees, producing bloom in abundance, which is succeeded by the little thorn-apples. Our native species have yet been but little cultivated, although well worthy of attention, especially on extensive grounds. They are hardy, reliable and handsome. These should make a part of the collections on public parks, and the broad grounds of large institutions. The cultivation of the varieties of the European Hawthorn, *Cratægus oxyacantha*, is more common, and the preference given to them for small or ordinary sized places is merited; the double-flowered varieties of it are particularly handsome. Yet another rosaceous shrub worthy of notice here is the Bird Cherry, or *Prunus Padus*. This is a European species, and becomes eventually a low tree. It much resembles our native Choke Cherry in general form, and in foliage, and in its flowers, which,

like it, are produced in long, drooping racemes. It produces a small, black cherry that is greedily eaten by the birds. Planted in masses with other trees and shrubs, it is showy and attractive in its season of bloom, and its foliage is always clean and bright.

Though not advising their planting for ornament, which, however, might be advisable for some particular spots, in this connection we can scarcely refrain from making a passing notice of the Blackberry, another of the Rose-like plants, blooming at the time of the Thorns; especially might the Running Blackberry, or Dewberry, *Rubus Canadensis*, be employed to advantage in covering banks and rocky grounds. At the time of the thorn-bloom, another tall shrub or low tree, spreads out in profusion its great white blossom-like involucre, inviting insect visits, gladdening our eyes with their expressions of gratitude, as they apparently rejoice with the fulness and vigor of



PRUNUS PADUS—BLOOM.

life. We now refer to our native Dogwood, *Cornus florida*. This shrub, or tree-shrub, should have more attention given it in ornamental planting than it

has yet received. It grows from twelve to thirty feet in height, according to the nature of the soil; it has clean, handsome foliage, is quite hardy, and in the bloom-



CORNUS FLORIDA.

ing season is remarkably showy. The flowers are very small and are borne in a small umbel or cluster, and are surrounded by the large white bracts, forming an involucre, and appearing like a large flower at least three inches in diameter. A well grown specimen, covered in its proper season with the large white blooms, is a most admirable object. It is desirable for large grounds and for planting in masses. Other native species of the *Cornus*, blooming later, are worthy of attention; one of these, *C. stolonifera*, a low shrub with red-barked twigs, is already considerably planted, but there are yet others deserving attention.

Before the blooms have faded from these shrubs just noticed, a great number of others are coming on and beginning to present themselves. The *Lilac* of many varieties, the *Snowball*, the *Weigela*, and then *Syringas* and *Deutzias*, and many others. By a proper selection, our gardens and lawns may be made bright with hardy flowering shrubs, from the early spring until the close of summer. With a knowledge

of the abundance of floral wealth of the plants we are now considering, it is surprising when we look about upon residence grounds almost everywhere to see so little attention given to the culture of flowering shrubs. To be sure, one or two may be seen here, and another there, but no proper use and skilful arrangement of them, as there easily might be, so as to make a continuous display. By planting in irregular clumps or masses, and arranging them principally about the borders of the grounds and near the walks, a large variety might appear even on comparatively small places. Trees and shrubs should form the strong features of ornamental grounds, while the tender flowering plants will then appear all the more delicate and beautiful; the latter without the former, present only a weak, pretty expression.

In lawn planting the effects of the combination of plants must be observed; their particular characteristics must be considered as subordinate to the general effect; and in so saying, no discrimination of comparative value is intended between any plants or classes of plants; all have their value and their interest,



CORNUS FLORIDA—BLOSSOM.

and the peculiar features and qualities of each may appear to best advantage when properly associated. The material for making our grounds beautiful is ample. Who will properly use it? See the canvas and the colors, but where is the painter?



GERANIUMS.

At the risk of being accused of "Carrying coals to Newcastle," by writing about Geraniums for the readers of this MAGAZINE, in whose pages it seems as if nearly everything that is worth saying about them has already appeared, I would like to say a few words about a flower which is not only a favorite of mine, but apparently, of the whole nation. There is probably no flower more generally cultivated in America than the Geranium. In fact, there are not many houses "either humble or proud," which cannot boast of at least a few specimens of this plant. The reasons for its great popularity probably are, that it has the ability to endure almost any amount of neglect or ill-treatment, and its determination to flower under adverse circumstances and at all times of the year. The Geranium is no aristocrat, but is emphatically the flower of the people, giving forth its blossoms quite as plentifully when lodged in an old box or superannuated keg as when domiciled in the finest Majolica vase. Much has been done by florists during the past few years to improve this plant, and their efforts have been crowned with success. We have now so long a list of varieties desirable for beauty of form and color that one might well hesitate when attempting to select specimens, hardly knowing which to choose from so many charming kinds.

Some of the most beautiful varieties, such as The Jewel and Le Negre, have not succeeded well with me in the house, but were marvels of loveliness in the open ground. I have found Alba Perfecta, Bataclan, Gelein Lowagie, Guillion Mangilli, Madame Thibeaut. Depute Lafize, Mrs. E. G. Hill, and the well-known Asa Gray, are among the best of the double varieties for house culture.

These varieties represent many, if not most, of the decided shades in Geraniums, with the exception of magenta, which is exemplified by the Depute Ancelon and Depute Varroy, both of which are worth cultivating. Alba Perfecta is to me the most pleasing of the double whites, having little or no tinge of pink, even when kept in a south window. I have never raised it in the garden, and consequently cannot tell whether the sun would there cause it to assume that pinkish tint which detracts so much from the beauty of the so-called white Geranium. For a window plant it is a perfect treasure, being a free bloomer and having good clusters of large and finely formed flowers in addition to its purity of color. Bataclan is one of the most satisfactory of the winter-blooming varieties, having large flowers of a beautiful violet tint, and being a most abundant bloomer. Bishop Wood and Guillion Mangilli are similar in habit and appearance; the latter has perhaps a little larger flower, but it is hardly so double as that of the former. Both are fine types of the scarlet and violet colored varieties, and are in every way desirable. Madame Thibeaut is a gem; its numerous flowers are of great size and of an indescribably beautiful color—a sort of rose, shaded with violet and marbled with white. Everyone who owns even a few Geraniums should have one of this variety. Gelein Lowagie is another excellent variety, being a free bloomer, with large flowers of a flaming scarlet marked with salmon. It is one of the most brilliant and showy kinds. Depute Lafize is another favorite of mine. I do not think I ever saw another double Geranium of so rich a hue. Its large flowers, which are freely produced, are very dark and of a velvety appearance. Mrs. E. G. Hill, one of the new

Geraniums, is very fine, having a large cluster. The individual flowers are of good size, pale blush, overlaid with a delicate lavender shade. The Asa Gray merits the popularity it has gained, being one of the best winter-flowering Geraniums. Sulphide, Emily Laxton, Simon Delaux, Candidissima plena, and Wonderful, are also fine specimens of the double Geranium.

Of the single kinds which I have grown, Dr. Denny, Jealousy, Leviathan, William Cullen Bryant, John Salter, New Life, Snowden, and Ralph, are all satisfactory. Dr. Denny is one of the most beautiful, if indeed it is not the prettiest of all Geraniums. The perfect shape of its flowers, with their lovely shading of purple and magenta, lighted by dashes of orange, renders this variety pre-eminently lovely. In addition to its other good qualities it has that of free-blooming, producing very fair sized trusses of good shape. All those who cultivate Geraniums should include Dr. Denny in their collections, for it is a great source of delight to its possessor.

Jealousy is a variety that excels in regard to the color and quantity of flowers it bears. Its large blossoms, of a very light red tinted with yellow, and marked with salmon spots on the upper petals, render it a very noticeable plant. It is one of the best both for house and garden. Leviathan is one of the best single scarlets, putting forth immense clusters of large flowers, and is a very strong and stocky plant. I do not think the individual flowers of it are so fine in form as those of the William Cullen Bryant, which is an exquisite Geranium, noted for the size and beauty of its blossoms. John Salter is one of the most persistent bloomers of the light kinds, having a very dense cluster of light flowers with pink centers. New Life is so well known as to need little description, but, as some one has written disparagingly of it, I would like to say that I have found it to be a very satisfactory Geranium. It is true that it sports occasionally, but that can hardly be a disadvantage when it gives you the benefit of several varieties of flowers on the same plant. I have never known it to do anything worse than to return to its original plain scarlet, and it is even then very bright and pretty. Snowden is one

of the best single white, and Ralph is very fine, somewhat resembling the Dr. Denny in color, and would, I should think, be a fine bedder. We admire the flowering Geraniums. They brighten our long and dreary winter, and light up our gardens in the summer time. They are old and tried friends, and yet I do not know that they are any dearer to many than the old Rose Geranium, which has so long held a place in flower-loving hearts.—MRS. H. R. L., *Hoosac, N. Y.*

CESTRUM AURANTIACUM.

The Orange-flowered Cestrum, *Cestrum aurantiacum*, is a deciduous green-house shrub, attaining a height of from four to six feet. It belongs to the natural order Solanaceæ, and is a native of Gautemala, from which country it was introduced by Mr. SKINNER, who discovered it growing in great luxuriance in the neighborhood of Chimalapa. It is a plant most easily cultivated, and is well worthy of, and deserves a prominent place in all collections, on account of its rich, bright orange-colored flowers being produced in the greatest profusion from October to January, a period when all flowers are most highly prized. The flowers produced in terminal and axillary spikes, are of a bright orange color, and are slightly fragrant; they last for a considerable period, and are succeeded by white pear-shaped berries, which contribute to render the plant still interesting, even when entirely destitute of leaves. The berries last for a period of two or three months, but whether it is advisable for a person to allow them to remain or not, is a question I would not like to decide, as they are said to be very poisonous when ripe. When this plant is grown in the house, I think it best to remove the berries as soon as they are noticed, but in the green-house they may be permitted to remain, still I would caution all against placing them within the reach of children. Notwithstanding the reputed poisonous character of the berries, the plant may be grown by all with perfect safety, and as it is a plant that can be wintered in a cool, dry cellar, or under the stage of the green-house, it is deserving of all that can be said in its praise.

As already noticed, it is a plant of the most simple and easy culture, merely requiring good drainage, a compost com-

posed of two-thirds well-rotted sods, and one-third old manure or leaf-mold, well mixed, abundance of pot-room for its roots, and, when growing, plenty of light and water, but during its season of rest, which is during the winter months, it should be kept cool and dry. Propagation is effected by cuttings, and if the young plants are liberally treated, they will form fine flowering plants in a short time.

When a plant has ceased flowering, it

be removed to the house. In flowering when well-grown, the terminal spikes open first, and are succeeded by the axillary spikes, thus the plant continues highly ornamental for a considerable period. I have always found this plant to be perfectly free from insects.—C. E. P., *Queens, L. I.*

CYPRIPEDIUMS.

I have read with interest the pleasing contribution about the Yellow Lady's Slipper, and think it may afford the writer of it, and perhaps others, some pleasure to be informed that the smaller Yellow Lady's Slipper, *Cypripedium parviflorum*, is as beautiful as *C. pubescens*. The smaller species possesses the charm of being fragrant, and of producing several blossoms on its slightly leafy stem. Its usual place of growth is damp, grassy thickets, near the edge of the forest or wet meadows. Besides the above mentioned species there are several remarkably lovely and singular flowers of this genus, among which I would mention the Pink-flowered *Cypripedium*, with large, pure white sacs, veined and dotted with shades of rose and lighter crimson, often with two large flowers, the leaves clasping the stem, of a bright, light green color. The petals are blunter, and the sepals are of a dull, whitish brown, and less twisted than those of the Yellow Slipper plant.

This species delights to grow in Cedar swamps or Tamarac woods, among damp mosses and rank herbs. It will bear garden culture if great care is taken to remove the fibrous bulbs with a good bit of swamp-mold, and then must be often watered; it

must be in the shade, as it does not love the glare of sunlight. This is the *C. spectabile* of the botanists. But a grander plant is the large purple and white Slipper plant [Probably the same species.—ED.] This noble species grows on dry plain lands among Oak brush, and attains the height of from two to three feet; the large ovate leaves are very hoary—



CESTRUM AURANTIACUM.

can be placed in a cool cellar or under the stage of the green-house, taking care that it does not become too wet. About the first of May it should be cut back into shape, turned out of the pot and repotted. The plant should then be plunged in a situation fully exposed to the sun, and be at all times liberally supplied with water. On the approach of frost it should

with whitish hairs—giving a dull hue to the foliage. Buds are globular, of a delicate Primrose tint; the flowers are pure white, the sacs veined and clouded with deep purple; there are from two to three flowers on each stem; the petals and sepals are flat and blunt, turning pale brown before fading away. One of the remarkable peculiarities of these plants is the appearance, taken by the arrangement of the floral organs, which, with the whole construction of the flower, should be made a study by the young student.

On raising the flat horn-like appendage which covers the stamens and pistils, the foot of some animal may be seen. In the Pink Slipper, that of a sheep; in the large purple-flowered, that of an ape; while the long nose and black eyes of the Indian warrior may be fancied in the Yellow Slipper, the petals and sepals taking the place of ears. The last I shall notice is the Single-flowered, or, as it is named, Stemless Slipper plant, *C. Acaule*. The large sac, of a rose color, veined with zig-zag lines of deeper red, is not entire as in the former species, but divided and folded over so that the opening is not visible until you part the seam-like division. The petals and sepals are upright, sharply pointed, of a shade of green tinged with dark purplish-red. This handsome plant is one-flowered, scape smooth, round leaves, two only lying flat to the ground. It is chiefly found on rocky islands, in the ravines where the mould is black and thick.

There are several other species of this family, but these are the most important, and those with which I am most familiar, having studied their habits in their native fields.—C. P. T., *Lakefield, Ont.*

CLIMBING FERNS.

I potted my *Lygodium scandens* when I received it, a small plant from my florist. I used a loam composed of well-rotted manure, leaf-mold, and turfy loam, and it has grown beautifully ever since, without any further care than I gave the rest of my plants. Its position is the center table of a sitting-room, lighted by a bay-window on the east, and a double window on the south; the windows are large, and furnish it with abundance of light. I prize the plant very highly.—MRS. J. B., *Butler, O.*

COLOCASIA ESCULENTA.

The *Colocasia* usually known as *Caladium esculentum*, which is so largely used in ornamental beds of tropical plants, is found growing uncultivated in the Southern States along the rivers. About two years ago, while visiting Florida, I was greatly surprised to see this plant with its majestic leaves in such grandeur on the sides of the St. Marks river near Tallahassee. Having seen many large sized plants in the northern part of the country, I was the more astonished to see them in such a perfec-



COLOCASSIA—FLOWER AND BUD.

tion there in a wild state. There I first saw them flowering. The flower itself has the shape of the well-known Jack-in-the-pulpit, but it is considerably larger. The pure white spadix is surrounded by a beautiful buff-colored sheath. Some of the sheaths or spathes measured nearly twelve inches in length. I have heard of *Caladiums* flowering occasionally at the north but the season is too short to allow them to develop without good care and without keeping them continually green. Last year I was called by a friend to see a flower here of which I then made a sketch, and from which the accompanying engraving has been made.

A small bulb was planted four years

ago, and as soon as cold nights came, the whole plant, disturbed as little as possible, was placed in a tub and kept during the winter in a conservatory, with the same care as it had out-doors all summer. This was repeated every year, and the result was three beautiful flowers. The plant covered a space of five feet in diameter and was nearly six feet high. The largest leaf measured twenty-eight by thirty-nine inches. Plenty of water is necessary, and at least twice a week some liquid manure should be given.



COLOCASSIA ESCULENTA.

Those who have no place to keep Caladiums growing during the winter, should dry off the bulbs perfectly before storing them away. It is not necessary to start the bulb in a green-house; a hot-bed, or even a warm sitting-room is sufficient. If started early, place the bulb in a small pot, shift it into a larger one when the roots fill the pot, and keep on in this way until the ground is warm enough, say about the middle of June, to set out in the ground. Large plants can also be grown in pots from twelve to fifteen inches in diameter, well adapted for specimen plants.—C. M., *Rochester, N. Y.*

TURNIPS ON THE PRAIRIES.—From a quarter of a pound of seed received from you last season, I raised thirty-five bushels of splendid Turnips. The variety was Purple-top Strap-leaved. I shall use the same kind again this season, and hope for equally good results. The frequent rains last autumn were extremely favorable. Turnips are easily raised on our prairie soils, and more attention than they now receive should be given them.—F. D., *Industry, Ill.*

MAY IN SOUTH CAROLINA.

MR. VICK:—Strawberry season is upon us, and we, of this bright Southern clime, are reveling in the enjoyment of these delicious sweets from morning until dewy eve; our "maumero" of the Sunny South come laden with this fruit of the wild woods, so generously spread for our plucking by the hand of Nature; our tables are supplied morning, noon and evening by this dessert, rich and rare, which we can buy at low prices; these fresh crimson berries are sold, capped, at ten cents per quart, and when our meals are eaten we fill the berry dishes with them, then cover with white sugar which has been passed through a sieve, and around this we pour the sweet, rich cream, and this gives us a dainty dish fit "to set before the king." Nature is truly beneficent to us in many ways, and with the bright and beautiful flowers and fruits of our land, thus bestowed upon rich and poor alike, truly we might say, "Life is what we make it." We anticipate a fruitful year; our Peach and Pear trees are weighed down already by the abundant crop. Many flowers are blooming, the pit plants are now, May 10th, all out of doors, and though not yet recovered from the effects of their removal, bid fair to flourish in their new quarters. Roses are covered with buds and full bloom flowers, giving forth sweetest fragrance. Mocking birds carol sweet strains around us, and build their nests at our doors. The school children are happy and glad to know that the minnows will bite since Dogwood blossoms have bloomed, and Azaleas have brightened the woods; there is the Trumpet Honeysuckle, (which we call Woodbine,) and Yellow Jasmine blossoms fall like showers of gold. On the banks of creek and brook Blue Violets peep from shaded dells; there, too, Oxalis blooms, which children call Sorrel. In the fields and green pastures Cowslips make their brightest show; wild Salvia (blue,) is found there, too. In spring time our woods are full of beauty, you should see them to appreciate them. Picnics are now the order of the day; on these excursions the young people can enjoy rural life to its fullest extent.

To-day we have gathered and eaten green Peas from our garden for the eighth time. Irish Potatoes, Beets and spring Turnips are ever ready, Lettuce and

Radishes are over. Our vegetable gardens are very flourishing this spring, the weather has been so favorable to grow everything up to this time. Sweet Potato patches have been planted already, also, Musk Melons, Squashes and Cucumbers. Pole Beans are running fully one yard in length, and Bunch Beans are up.—MRS. J. H. F., *Lancaster C. H., S. C.*

A BEAUTIFUL POT PLANT.

To those of our flower-loving friends who have never seen the plant, *Ardisia crenulata*, called in this section of country, Coral Plant, I would like to recommend it as one of rare beauty as a pot-plant. It is a greenhouse plant, but is not so easily injured by cold as are most kinds.

The *Ardisia* is of slow growth, but does not require skilful treatment; in fact, it will thrive when treated even not as well as an ordinary house plant. In shape, it is very symmetrical, and the foliage is very pretty—glossy, and of a dark green color. I have never known spiders, worms, scale-insects, or any of the flower-pests to molest the *Ardisia*; hence the leaves never present a ragged or unhealthy appearance.

Blooms do not appear until the plant is two or three years old, and then the flowers are white and insignificant in appearance, being very small. After the blooms fall, berries are formed, which, in the autumn are of a beautiful coral-red color. The bunches are large, each containing quite a number of berries, and are arranged in a whorl around the stem of the plant. The appearance of the bunches remains unchanged throughout the winter season, thus always presenting a bright and attractive spectacle. In fact the berries seem to be everlasting as they are still in undiminished beauty, when a second year's crop of berries in another whorl hangs above them. Each year a new whorl of bunches is formed, while the oldest ones appear unchanged, unless they are broken off or picked off by birds. Birds seem very fond of them, and if placed out of doors the berries will soon disappear, unless the plants are protected by mosquito netting or something of the kind.

Young plants are easily obtained by planting the berries when matured. When several crops of berries are allowed to

remain on the plant they become too heavy, and some have to be removed to prevent distortion.—MRS. E. B. H., *White Plains, Ga.*

ASPECTS OF THE PLANT WORLD.

The science of botany introduces us to nature, and by it we become acquainted not only with the structure of plants, but also with their beauty and variety, and with the importance of the vegetable world. What a spectacle would appear before our eyes if we imagine but for a moment, our earth entirely stripped of vegetation! If, instead of the simple green, we should see the animals of different colors, and the birds in their most brilliant attire, such a sight would be to us most solitary and disconsolate. Animal life without vegetation is simply impossible. The existence of animals depends upon the existence of plants. Thus, in one sense, plants are the most important natural objects.

If the great value of plants is able to command our attention, how much more are we attracted to them by their various and beautiful shapes, by their interesting habits, their wanderings, their variations, and their life-changes from germination to fruit-bearing. It is therefore not surprising that so many people seek and find enjoyment and recreation in the green open fields, in the forest, and in the garden, and also, that so many naturalists are wholly occupied with the study of plants.

Wonderfully great is the variety of plants that cover the face of the earth. The species are most numerous where the sun ascends high in the firmament, and less in number towards the icy poles, where the quickly returning frost destroys the scarcely developed buds, and snatches away the fruit which has just ripened. But every region habitable by man is that of a life-sustaining flora.

Plants cover not only the surface of our earth, but also some tracts of the sea. Each landscape owes its peculiar appearance to the character of its plants, because many species exist in great masses, and so have been called social plants. How different the aspects of a pleasing plain and a lofty forest with its grave and sombre gloom! How different are the waving corn fields, the green grass plot of the meadows, and the slope of a rock,

decorated by variously colored flowers. The influence of plants in the aspect of landscapes becomes more apparent when the view extends to zones possessing very varied climates. If we turn to the snow-covered, icy coast of the high north we find spread before us a belt in which nothing but low Mosses and minute Lichens, together with few, but nevertheless pretty, blooming herbs cover the ground, but where no tree nor shrub thrives. Further towards the south, low coppices of small shrubs and crippled trees are seen, followed by forests of dark Pine woods; the proper culture of grain is still lacking. Grain is cultivated with success only where leafy woods with deciduous leaves and large grass plains appear. Still further southward, entirely different plants appear before us. The fresh green of the meadows is sought in vain, but evergreen, leafy trees, with coriaceous, shining leaves, and the noblest kinds of fruits appear, till at last, in the tropical zone, plant-life is displayed in the most luxurious and wonderful forms, exacting from the stranger unaccustomed to such sights, the highest admiration.

A similar variation of plants may be observed on very high mountains, especially in the tropical zone. For example, at the foot of the Peak of Teneriffe, we find thriving among other tropical plants, Palms and venerable Dragons—trees with stems supposed to be thousands of years old, and which may be best described in a word as tree-like Lilies. In ascending the height of the mountain, 3644 meters, (11,946 feet) we arrive consecutively at a region of evergreen woods, then at a region of leafy woods which are only green in summer, and then at a region of Pine woods; above this line, at a height of 2000 meters, the vegetation suddenly diminishes and passes over through low coppices into a belt of crippled trees and shrubs, scarcely a foot in height, interspersed with Lichens and Mosses. Above this belt, plants disappear in the same manner as in the high polar regions. Thus are found on this mountain all climates, with their indigenous plants, ranged by strata one above the other.

Plants are not only remarkable in their distribution, but an accurate consideration will convince us of their great importance in the whole economy of nature.

Regions destitute or poor in plants are unhealthy and scarcely inhabitable. Why is this? The leaves as well as the green outer skin of plants have many little apertures through which they receive and discharge gasses and moisture. Therefore, it is said that plants breathe with their leaves, as animals with their lungs. We know that plants separate the carbon from the carbonic acid gas existing in the atmosphere, and use it, and at the same time set free the oxygen, which is indispensable for our life. In performing this useful office they purify the air. Plants, those wholesome children of our earth, thus use an element that is destructive to man; the air we inhale in an infected condition is taken by them and given back purified. How refreshing it is to spend in summer an hour in the cool shade of trees, when the sun shines so painfully hot. It is not only the cool shade, but, also, the pure air that makes us feel so comfortable.

As plants use much moisture and part with it again, regions abound in woods only where moisture is plentiful. And it is probable that forests are usually conservatories of moisture. Many an island, as for example, Barbadoes, which had formerly plenty of water, has at the present no rain nor fountain, because the forests which formerly covered the mountains have been cut down. As a penalty, people now are obliged to carry the water they need many miles from other islands.

The old Greeks and Romans prevented the destruction of trees by putting every species of them under the protection of a special deity. Our forefathers, especially the old Germans, honored their gods in forests, principally in Oak and Linden groves. Every land-owner should, if possible, plant trees, fruit trees as well as forest trees. Trees surrounding houses situated on high ground protect them from wind. Houses sheltered by high trees remain unhurt during storms, while others, otherwise situated, are often damaged. It would be wise to plant, if possible, a tree at every feast given, as a life monument of the occasion. The great sovereign, Frederick William, commanded that every farmer should lay out a garden on the premises of his farm, and that no farmer's son should get married before he had grafted six young fruit trees and planted six Oak trees.

The use we derive from plants is exceedingly great. Plants animate the whole realm of nature, attire the naked surface of our earth in the loveliest green, and transform untenable districts into most charming fields. Through their influence upon the atmosphere they contribute to the life and health of animals and man. They open to the animal world the inexhaustible fountain from which it draws everything needed for the maintenance, enjoyment and welfare of its members. A great number of plants are of service to man; roots, seeds, and other parts of plants forming food and drink. By self-made necessity he smokes tobacco and chews betel. His clothing is formed of cotton and linen, and the wool of thistles, and the fibres of many other plants. He makes from wood a great number of tools and instruments to assist him in his occupations. He builds with it all kinds of dwellings for protection against the inclemency of the weather, and for his comfort; his skill enables him to construct vessels in which to traverse the seas from one continent to another, thus affording great advantages to all nations. For the preparation of his food and for heat and light, he is in a great measure dependent upon plants. Many plants serve him for dyeing, tanning and innumerable other operations; many for medicine, perfumes and ornaments; and many furnish nutritious and healthy food for animals, and otherwise promote industry and commerce, and often constitute the wealth of nations. No plant, however humble and unnoticed is valueless, for each has its mission and its office in ministering to human welfare.

Besides the manifold uses of plants, they delight us by their beautiful forms, the variety of their colors, their fragrance and their purity. Flowers are the companions of sensible persons. Poets glorify them, and depict in the most appropriate terms the loveliest scenes of innocence, love and truth from impressions received from the variegated world of flowers. Bouquets are the most appropriate ornaments of our rooms, and for all joyful and sorrowful events of life, from the cradle to the grave, decoration with flowers appears to be indispensable.

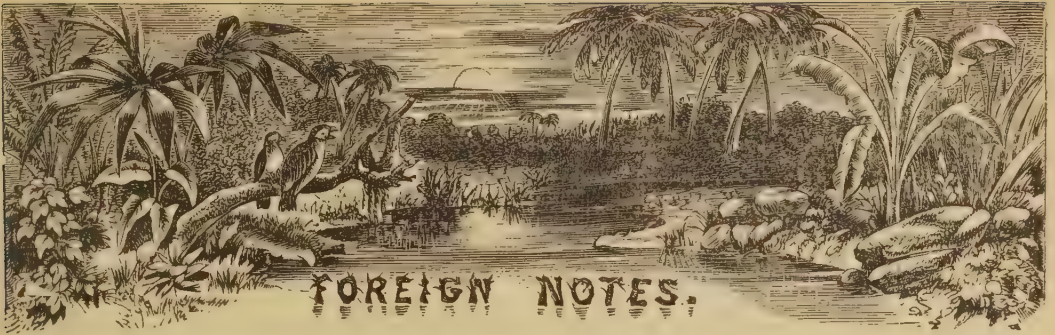
The love of flowers is very great at the present time; it extends through all parts of society, and is manifested by the

humble Violet in the cottage of the poor laborer, and the rare plants of the tropical zone in the palace of the sovereign.

Flowers heighten and glorify the impressions of our feasts and memorable events. Bouquets and wreaths are made in days of joy and sorrow. We employ them at birthday celebrations and marriage feasts, and we strew flowers into the graves of our beloved dead, and plant them on their tombs. Whoever in gardens, fields and forests, uselessly destroys or injures trees and plants, by so doing, manifests a defect of the sense of beauty.—MRS. A. L., *Cincinnati, O.*

FLOWERS AND INSECTS.

All admire the colors and forms of flowers, but these are only part of their endless attractions. Close observers have found out many curious things which hasty lookers never see. That close questioner of nature, CHARLES DARWIN, who has lately shown us how we owe the means of our existence on earth to the humble earth worms, found that insects were attracted to flowers by their colors, and that different insects choose different colors. He cut the showy petals off some of the flowers in clumps in the garden, and found that bees never went near those, though very busy with the others. Sir JOHN LUBBOCK put honey in glass over colored papers, and found that bees readily discriminated and always went to the blue, as they do in the flowers. MULLER noticed that each kind of butterfly visited only its own favorite color of Lantana. GRANT ALLEN shows that as nearly all colored flowers depend upon insects to brush the pollen on the stigma and so cause them to produce seed, that their preference for the intensest color of their choice tends to the production of the most seed from them, and so to the fuller development of color. He shows too, that at first, the only color was yellow, as seen in the seed parts of nearly all flowers still, and that white, pink, red, purple and blue were developed in succession. Many flowers still open with a yellow or pink tinge, and gradually change through this series to some shade of red, or finally, blue. Blue and purple are most common in complicate corollas which only bees and butterflies penetrate easily; moths only see white flowers.—W.



A GOOD TREE-SEAT.

A style of tree-seat figured in a late issue of the *Florist and Pomologist*, and here re-produced, appears to combine some excellent features. This seat is designed especially for parks and pleasure grounds. It is made in three separate parts, equal sections of a circle, so that placed together around a tree, as intended, a circular seat is made around the trunk of the tree. The uprights are of wrought iron, and the hard wood slats



are bent to shape. The size may be varied as desired. The seat from which this sketch is taken, and which probably is the size most generally useful, is six feet in diameter, and can be placed around a tree thirty inches or less in diameter. This seat combines lightness and strength, and its construction in parts enables it easily to be removed.

GIANT HORSE-TAILS.—*Equisetum giganteum*, the mammoth Scouring Rush, growing in Brazil, is said to have stems thirty feet in height.

TREE FERNS.

The writer whose description of Pitcher Plants in Borneo was given in our last issue, mentions the Tree Ferns among other plants, and from a sketch taken of them as they appeared in their native home, an engraving has been prepared and given in the *Journal of Horticulture*, in connection with his remarks in relation to 'them. From that source has been obtained the present illustration. "Here and there along our route," says the traveler, "especially alongside the little stream which trickles down the hillside Rice fields of the Kiva villagers, we came upon isolated specimens or little groups of graceful, slender-stemmed Tree Ferns. How they had escaped the fires by which the forest had been cleared off the land, often puzzled us; yet the fact remained that they had been spared, and very fresh and cool they looked, their roots buried in the moist earth near the rills, and their feathery plumes shimmering in the blazing sun. They were sufficiently large and numerous to give quite a characteristic

appearance to the sloping Rice lands on the hills, as Bamboos and Palms do to the alluviate plains beside the rivers at a lower attitude. Take away from a tropical forest Palms, Tree Ferns, Bamboos, and that most noble of all fine foliaged plants, the Banana, and its tropical value is gone. The remaining vegetation, so far as its general or distant effect is concerned, is that of any European forest of deciduous trees as seen during summer. One type of tree beauty is absent from the tropics proper—that of the Pine and Fir woods of Northern Europe and

America—and the fact brings home to us the great truth, that while art enables us to grow tropical Orchids, Ferns, and Nepenthes in our cold climate—the world's flora, in fact—it is powerless to give the fragrance of Pine woods, the sparkle of spring-flowering bulbs, and the treasures of Alps and Appennines to those who live in the tropics. Hence, tropical gar-



TREE FERNS.

dens, while their luxuriance is simply wonderful, are far less rich in species than our own.

And this phase of the question, however, is perhaps worth a thought. Tropical vegetation must ever to a great extent be imprisoned—pent up beneath a crystal roof in European gardens; but at home, the Tree Ferns, the Palms, the Orchids, and other plants are free, waving their feathery plumes beneath a cloudless sky, or their flowers are kissed by the gentle breezes, and dangle from branch or fallen trunk in variety seemingly infinite.

In regard to Fern trees, a writer in the *Journal of Forestry* says “‘My first Fern Tree’ is to all travelers as welcome and ever-to-be-remembered a sight as ‘my first snow mountain,’ and the first glimpse of its dark red-brown trunk rising from a bed of Maidenhair and other Ferns to the height of twenty feet or so, with its glorious crown of long feathery frouds spreading in every direction from the summit, and falling outwards and downwards in a graceful fountain of green, is sufficient to bring to the lips an expression of delighted surprise.

Fern trees, the Palms of the Fern World, are amongst the loveliest productions of Nature, and Australians may well reckon themselves fortunate in having such things of beauty almost at the very doors of even the dwellers in great cities. Adelaide and Hobart are perhaps the most favored of the capitals, having each bowers of Fern trees growing within an hour's drive of the heart of the city. In the great Huon forest, which clothes the southern and western slopes of Mount Wellington at the back of Hobart, are whole groves of Fern trees growing so thickly together and so luxuriantly, that as one passes up their long, cool aisles it is only here and there that a stray sunbeam pierces the ceiling of pendulous greenery overhead, whilst beneath one's feet are the decaying trunks of thousands of their predecessors which have succumbed to old age and the fury of the mountain storms. I measured a frond from a giant specimen in one of these groves fourteen feet in length.”

AMARYLLIS MRS. GARFIELD.

This variety that obtained last year a first class certificate from the Royal Horticultural Society of England, has proved after another year's trial “to possess a more accommodating habit as regards the time and season of its flowering than was at first anticipated.” It was raised by Mr. B. S. WILLIAMS, and it is said that he has it in bloom during several months of the year. By reason of its white banded leaves and white blooms beautifully veined with rose-pink, it is always an appreciated flower. It is one of the best in a family that now contains many novelties.” It is a pleasure to learn that a plant so honored had so good a character.



CUT WORMS.

Does the *Dielytra* (or *Dicentra*) *spectabilis* invite or allure the cut worm?

I admire the *Dielytra* more than any other hardy plant, but let me give you my recent experience. Last Spring I got a small piece of root and put out as soon as the ground was open. I was delighted to find a few shoots come up in due time. One morning I found one of these shoots cut off: I dug near and found a cut worm. A few mornings later I found another shoot gone, and only one remained. I dug again and found the enemy. This time I searched the earth several inches deep, and a like distance round the plants. I took a Strawberry-box, removed the bottom, and, placing the box over the plant, sunk it half its depth in the earth. By this means I saved the remaining stalk, and had four or five little Bleeding Hearts.

This spring I thought I would be ahead of cut-worms with my protection. At the first sign of the appearance of the plant above ground, I dug about it and found one worm, about half an inch long. I then took a Summer Crook-neck Squash, cut off the neck and the blossom end, and pushed the shell down around the plant, and felt safe.

A few days since, I took a trowel and poked about in the ground and found a number of cut worms, and then thought of my *Dielytra*. I dug about the outside of the Squash shell, and found so many worms that I took the trouble to count them as I laid them out, and found one hundred and seventy-eight. I then carefully lifted the shell and probed a little. Oh! what a sight! I lifted the plant, and here, close about it, were one hundred and sixty-eight more of the worms. I washed the roots of the plant and placed it in another bed. I suppose I did not dig deep enough the first time, or, perhaps, they were very small, possibly not hatched. I know nothing about the parent, but suppose it to be a winged creature. What can I do? How can I prevent such pests or destroy them? Did it just happen that so many worms were about that little plant, or did they select it by preference?

I remember trying, in my youth, to raise *Dielytras*, but never in all my life had a good plant. I wonder now if the trouble was always cut worms. Shall I give up trying? I loathe a worm, any way. The most opprobrious, abhorrent comparison for human beings is to call them poor, sinful, worthless worms. —MRS. J. T., North Ridgeville, Ohio.

Cut-worms are the caterpillars of several species of the moths. They live underground, but come to the surface at night and devour the young, tender shoots of plants. In this manner, they

often do an immense amount of mischief in the vegetable and flower garden, and in Corn fields and elsewhere. The moths lay their eggs in summer and early autumn, at the roots of trees and plants; the eggs of some kinds hatch out in the autumn, and the caterpillars burrow into the ground and live there all winter, and the eggs of other kinds do not hatch until spring. The caterpillars only do any mischief, and they remain in that state about four weeks, living upon all the young and succulent vegetation they can find.

The best method of exterminating them is to take the course described by our correspondent, searching for them wherever there is a suspicion that they may be lurking, and destroying them when found. Another means is to trap the moths by lights in the garden at night; a barrel tarred around the inside can have a light set in it, around which the moths will flutter until they happen to touch the sticky sides, where they will be held. Another device is to suspend a lantern over a wide, shallow dish of kerosene or other oil, into which the insects will eventually drop.

The *Dicentra* is not known to be a particular favorite plant of the cut worm. It has proved itself by many years of cultivation in our grounds to be a vigorous, strong-growing plant, remarkably free from insects of all kinds, hardy and easily raised, accommodating itself to all soils.

ROOTING CUTTINGS.—Cuttings of soft wooded plants, and of the half ripened wood of most of the flowering shrubs, can be rooted in the open ground all through this month. Cuttings with two or three leaves insert in mellow soil, and shade a little at first.

BULBS OF VARIOUS KINDS.

About a year ago I asked information about cultivating certain plants, and am obliged to do so once more, hoping to receive an answer in the next number of the MAGAZINE.

1. What is the best way of growing *Anomatheca cruenta* in the house?

2. What would you recommend to cover the barrenness of a pot of *Colchicum*, which I raised to perfection last fall? One bulb having as much as sixteen flowers. They would have looked much better with some green foliage of some description.

3. Could I raise *Bulbocodium vernum* the same as the above, or, if not, please let me know how.

4. How is *Zephyranthes ochroleuca* grown? Is it hardy, or is it grown in pots, and how?

5. How can I raise *Lachenalia pendula*, and *Schizostylis coccinea*? I have had no success so far.

By answering the above you will oblige a constant reader of your valuable MAGAZINE.—*Chicago, Ill.*

1. This little bulb, *Anomatheca*, from the Cape of Good Hope, can be raised in pots without any particular difficulty. As the bulbs are small a number of them should be placed rather closely in the same pot. The pot should have good drainage; the proper soil is one composed of equal parts of rich loam and leaf mold. Water only moderately. The bulbs may be potted about the first of January and then be kept in a moderate temperature. The flowers will appear in about four months and will continue during the summer. The last of August they should be allowed to dry off, and then to rest until January. As the seed is produced plentifully, there need be no lack of fresh bulbs, as it germinates freely and the young bulbs will bloom the second year. With its large leaves and scarlet flowers it is a beautiful little plant.

2. *Colchicum autumnale* comes so promptly into bloom in the fall after it is planted it would be difficult to raise any thing in the same time and in the same pot to cover the surface of the soil. But as this bulb is not particular about its quarters when ready to bloom, a little forethought and skill exercised in advance might ensure it about such a place as one might desire for blooming. For instance, some *Selaginella* could be raised around the edges of the pot that would wholly or nearly cover the soil, and at the same time space be left in the center for the bulb. Or, a smaller pot could be placed inside a larger one to receive the bulb, the space between the pots being occupied with soil in which *Selaginella denticulata* could be raised in advance. A very small pot is all that is necessary for the bulb.

3. *Bulbocodium vernum* is almost entirely raised in the open, but there is no difficulty with pot culture of it, if it is kept in a low temperature.

4. *Zephyranthes ochroleuca*, like other species of this genus, will, no doubt, readily respond to good treatment in pot culture. Good drainage, a light, rich soil, a gradual and slow rise of temperature as the bulbs advance, with a fair supply of water and plenty of light, are the requirements.

5. Bulbs of *Lachenalia pendula* should be placed in pots in October; water sparingly, but do not let them become dry after they have begun to push their leaves. A soil composed of peat and sand, or sand, leaf mold and fibry loam is best. A temperature of 65°, and plenty of light will suit them. *Schizostylis* will do well with similar treatment.

GERANIUMS—CACTUS.

As the time draws near for starting plants for another winter, will you tell us of some desirable dark or blood red *Zonale Geraniums*? I wish you could see the clusters on my *Orbiculatum*—four clusters as large over as a saucer, besides buds, on a little plant in a four inch pot. I consider it my best scarlet for free, constant bloom and a good shade.

Does the Lobster Cactus require rich soil in house cultivation?—A.

The varieties of *Zonale* and *Nosegay Pelargoniums* are so numerous and tastes are so different, it is not expected that any selection of a few varieties would please everyone. The variety described above is a good one, and it has done well in the present case. And this leads to the remark that quite as much, and probably more, depends upon the treatment plants receive than upon even a very careful selection from scores of good sorts. There are, to be sure, many differences in varieties, and it is well to notice them keenly, but it is far more important to secure and maintain the proper conditions for the welfare of the plants. This being the first care, one may then be critical in regard to varieties. As a rule, the lighter colored varieties are the best winter bloomers; but making a selection of darker ones, *Avenir National*, *Coleshill*, *Colonel Holden*, and *Dictator*, may be named as bright, high-colored sorts that bloom freely in winter.

A light, well-drained soil, moderately rich, is suitable to the Crab Cactus, as also, to most others of the same family.

THE TIME OF APPLE-BLOOM.

How sweet thoughts joined together
 Through mind's airy chambers sweep,
 In whirling groups all shadowless,
 When waking and in sleep.
 Love-dreamings of the long past days,
 And summer's flowery train,
 Crowd, ceaseless at the trysting hour
 To bless the world-tired brain,
 And, sure as those dear measures come,
 My darkness to illumine,
 I think of Mary Arnold,
 And the time of Apple-bloom.

We strayed beneath the speckled trees,
 We painted future bliss;
 Like kindred tints our hearts were joined,
 And the sealing was a kiss.
 The blooms fell round us, fluttering
 Like snow-flakes, soft and meek,
 But they had no touch of beauty,
 Like the bloom on Mary's cheek.
 Oh! even now, though years have passed,
 One breath of that perfume
 Brings thoughts of Mary Arnold,
 And the time of Apple-bloom.

There is no Mary Arnold now,
 Though the Apple blooms the same,
 She gave true love her heart to keep,
 And true love changed her name.
 She sits beside me and I see
 A beauty seen not then—
 No less now is her heart's true worth,
 Than when we strolled the glen.
 And when the fretting cares of life
 Would cover us with gloom,
 I kiss the Mary dear who made
 So sweet the Apple-bloom.

—WM. LYLE.

COLEUS FROM SEEDS.

The last spring, I planted a package of mixed hybrid *Coleus* seeds, and succeeded in getting a growth from almost every seed, I imagine, and then such a brilliant variety of colors, and such a divergence from all that I had ever before seen of the *Coleus* family. I matured two hundred and fifty plants, about two hundred of which, however, are discarded as not being sufficiently distinct to deserve survival. But the fifty were, and are, jewels, for I have them yet, and propose to keep them as long as possible. We wintered most of them in our sitting-room window, where they were things of beauty, as well as of utility. An even temperature is what they must have to thrive in; a room heated by hard coal securing that to perfection. But a less high temperature will serve their purpose, and at the same time be healthier for the human occupants of the room.

I sowed the seed in a five-inch pot, in sifted soil of loam and sand, with deep

drainage; and to insure indemnity against damping off when the time for feeding the plants should arrive, I resorted to the original scheme of inserting a shallow tube in the center of the pot, into which to pour the moisture. It worked like a charm. Certain it is, I lost no plants that showed themselves above the surface of the soil. I placed the pot on bottom heat in a small greenhouse which I have the satisfaction of possessing, covered it with a pane of glass, and in due time the young brilliants appeared. My success with them after that, which is indeed the critical time with seedlings, is due mainly to the irrigating scheme above mentioned. By means of it I kept the roots of the plants moist without endangering the stalks, and that brought them safely through until they were big enough to take care of themselves, so to speak. Among the survived fittest is one that is the especial admiration of all beholders, not so much because we call it "Old Maid," as because it is altogether unique; colors staid, though manifold; leaves fringed or ruffled, and large; in the summer dark; in the winter like leaves of autumn. Why we call it "Old Maid," in addition to the reasons given above, is that it has the appearance of a woman "terribly fixed up," and, as intimated before, perhaps that is why it is so much admired. Well, it is "beautiful as a butterfly," anyhow, and its exclusiveness does not detract from its beauty.

By all means, let all æsthetic followers of the *MAGAZINE* try raising seedling *Coleus*. It is a pastime full of surprise, and comparatively free from failures, especially if you adopt my plan, on which I will condescendingly add, there is no embargo.—W. H. H. D., *Greenville, Pa.*

FARFUGIUM GRANDE.

If your enquiring correspondent, G. L. D., of Kentville, N. S., wishes to know of a fine specimen of *Farfugium grande*, I have in my possession one grown in an ordinary sitting room, where there is little or no sun, but plenty of light. It has thirty-six leaves, many of them ten inches in diameter. It is in the ordinary soil used for plants in pots. It needs abundance of water.—M. J. McARTHUR, *Dartmouth, N. S.*

THE FLORIST YOUR FRIEND.

Choose a good florist and make him your friend. This would be my advice to all lovers of flowers, as the first step to real enjoyment in the culture of our lovely pets. How much money we all have spent on plants, some of which are truly beautiful when grown in their proper places, but entirely unsuited to our circumstances, and, after years of failure, we are tempted to throw them away in utter despair, unless, as often happens, we are relieved from that temptation by their dying after a lingering illness.

I have had my experience in this way, and the last thing I learned from it was to trust my florist to select for me; by telling him my ability to care for my plants, and my fancies, he would send me far prettier plants than I knew anything of, and much more suitable to my situation; so I was relieved from the cruel disappointments I had suffered from my unsuitable selections.

It is not necessary to know a florist personally to make him your friend. Who that loves flowers did not grieve with heart-felt sadness when JAMES VICK died? It was a real pleasure to have known such a man, if only through his MAGAZINE and FLORAL GUIDE, and I thank him for having given us his likeness in the last GUIDE. Sons trained by such a father could not help being good florist friends. My florist and I have never met, and yet we are the best of friends, and the loveliest things in my garden are the selections of his own that he has sent me. Plants I can raise to perfection if only I understand their needs, and many, many is the time my florist has informed me what to do to make them prosper. It is not at all necessary to have a greenhouse to have pretty flowers, and florists understand this better than we do.

I could not have believed it possible if anyone had told me that there were such Hollyhocks as would make me pass by the lovely greenhouse pots and choose them for beauty, and yet, I did this today. They are as double as it is possible to imagine, and of the loveliest shades of color. The Canterbury Bells are splendid, especially the new kinds with the large saucer of the same shade as the bell. I had asked my florist if these were a humbug, or pretty, and his reply was

a paper of seed for me to try, which I knew meant they were worth the trouble, or he would have said so, and saved me the disappointment. I had long ago made him understand I did not care for fashion or age, if a flower is only pretty, or I might not have gotten the lovely Hollyhocks.—MRS. C., *Warren Farm, Pa.*

FERTILIZING MOSS.

By this name an article is offered in New York to take the place of soil in raising plants. It is of foreign introduction, the so-called discoverer of it being Alfred Dumesnil, a French scientific horticulturist. It is claimed that "this wonderful discovery, by which plants may be cultivated without earth, or with earth in combination with the moss, bids fair to completely revolutionize present methods in the house-culture of flowers." A great variety of plants, it is said, have been experimented upon in this way, and even vegetables raised from the seed to maturity. In the language of the parties offering "any and all plants may be cultivated entirely without earth and under the the most favorable possible conditions for growing, flowering or bearing fruit. Their vitality is increased, their blossom and flower become richer and fuller, and their hardiness is augmented." Something of an air of mystery surrounds the announcement of this new vehicle of vegetable nutrition, and this mystery does not wholly disappear after reading the publication relating to it. From the French horticultural journals it appears, as we supposed it would on first hearing of it, that the "fertilizing moss" is Sphagnum mixed with some artificial fertilizer. The use of sphagnum or swamp moss for potting bulbs for blooming instead of soil, is well known, also its value for rooting cuttings, but no extensive employment of it for the general culture of plants has been made, and unquestionably M. Dumesnil is entitled to all the credit that attaches to it. The journals of Paris and Rouen, whose attention has been called to it, speak well of the method. The *Revue Horticole*, an undoubted, reliable authority, in one of its May issues, referring to it, says: "Attention is called to this subject, and special cultures are made in moss; it is true we speak of fertilizing it with special manures. Besides being nutritive, moss has, also,

the great advantage of allowing the air to reach its roots in considerable quantity; this agent, which contains nearly all the necessary elements to the development of plants, is indispensable to the proper discharge of their organic functions. Further, moss possesses a conservative property, due, very probably, to the condition that results from allowing a great quantity of air to reach the roots, since these roots are never overcharged with humidity."

In the last issue of the same journal appears an account by a correspondent, (Mellet, pere) of experiments in cultivating plants in pure moss. Last August, he set Strawberry plants in moss and they succeeded better than in the open ground. With this satisfactory result before him, he tried some Anemones; they bloomed later than those in the ground, but they were more beautiful. The last spring, (1882) he tried Melons, Verbenas, Beans, Peas, Petunias, Pansies and other plants, placing some of each kind at the same time in soil and in moss. "I am able to state," he remarks, "that the greater part of them did quite well, while others accommodate themselves only imperfectly to this mode of cultivation. His conclusion from his experiments is that "this method of culture intelligently practiced, will render great service to horticulture."

In relation to these statements the *Revue* remarks: "The experiences just stated in demonstrating that very many plants can be cultivated in moss, prove also that contrary to that which has been advanced, it is not indispensable that it should have been prepared; in so stating, we do not wish to say, that in adding certain appropriate fertilizers to the moss, the results would not be better." It is quite possible that this mode of raising some kinds of plants may possess advantages over the common one, and any positive knowledge in relation to it that we may receive will be, with pleasure, laid before our readers; in meantime, with the suggestions here advanced, some who have access to sphagnum, may, and probably will, make some intelligent trials with moss culture, that will, in due time, be reported to us to appear in our pages.* In such experiments it is best to note carefully the effect of the different fertilizers employed.

WINDOWS AND COLD-PITS.

Since taking your MAGAZINE I have become so interested in flowers that it is necessary for me to ask you a few questions which I have not been informed upon as yet. For the protection of Geraniums, Carnations, Fuchsias, Cactus, and plants similar to the Century Plant, Heliotropes, Wallflowers and several others of our bedding plants, during the winter months, would it be best to keep them in a pit or in a living room? We have no bay window, but a large south-facing window, and by putting up a glass case extending into the room a moist atmosphere could be kept. Would that be a good protection? Slips, or young p'lants, I wish to protect in that way, and old plants in a pit. I also want to be informed about a pit. Would three feet below the surface be sufficient depth with back wall extending two and a half feet above the surface and front wall one foot? Also, would boards do for wall, using two walls with dry saw-dust packed between?—BRADY, *Evansville, Ind.*

Young plants and cuttings can be protected as proposed in an enclosed window, and in the June issue of the present year this subject was somewhat considered and illustrations given; quite a variety of designs for the same purpose have been given in previous numbers. The pit can be built as proposed, and will successfully winter half hardy plants, such as those named. In Volume 3, page 213, engravings of cold-pit made with boards are given, and the method of building described.

PROPAGATING BEGONIA REX.

In propagating Begonia Rex, I divide the leaves so as to get a "rib" in each section, insert them in the sand-bed with my other cuttings, (I have a small greenhouse) and pot them off in earth as soon as rooted, treating them generally as I do other cuttings. I find this method to be altogether satisfactory, scarcely ever making a "miss," if the parent leaves are in a vigorous, growing condition when subjected to the dissecting process. My sand-bed, of course, has bottom heat, and can be shaded when necessary. I use no bell-glass, and no special care other than what I give to Fuchsias and Geraniums. But the real trouble begins with the Rex just about at the point at which it ends with most other plants. After they once start to grow they must be kept right on growing, and this requires close watching, in order to secure to them the essential of moisture, warmth and shade. However, I always feel amply paid for all the trouble which they cost me when I finally have a group of these regal beauties flourishing under my eyes.—W. H. H. D.

THAT HEN.

Jenny Dare has my sympathy in her struggle with the vagrant hen, which has proved such a fruitful source of annoyance in her flower garden, and nearly caused a suspicion of witchcraft. But let her not disturb her soul with superstitious fears! I think the hen has no evil spirit concealed under her feathers. At least, no worse than all barn-yard fowls harbor beneath their downy vests, or perhaps, in their sharpened claws. This particular hen is only an unusually smart and agile member of her tribe, whose capabilities have been developed by her necessities. She has been obliged to "scratch" for a living, until she has become self-sustaining. It matters not to her whether her hunting ground is the newly-plowed field, or the choicest flower bed—rather prefers the latter on account of its superior fineness. She does not even distinguish between the hardy Dahlia or Sunflower, and the Primroses or Odier Pansies.

I know, alas! from sad experience, the destruction that may be wrought in a flower bed, by a few minutes attention from a well-meaning hen. Like many another, who stops to sympathize with a neighbor in trouble, I take advantage of this occasion to state a far more serious grievance of my own.

If there were only one hen, and that one a vagrant, an outlaw, whose hand or claw was against every man, and every man's hand, gun and dog were against her, I should feel quite hopeful of the few flowers I sometimes try to raise. But there is little hope of success for a fine flower garden, when one of the family is a poultry fancier, who has legion of Plymouth Rocks, and silver spangled Hamburgs, and I know not what other aristocratic families of fowls. Of course, it is not supposed to be wholesome for the birds to be kept in close quarters; and there is usually no lack of apertures and "gates ajar" for them to enter into that paradise, the front yard, where the mellow flower beds afford the most delightful scratching and the most luxurious dusting. The stately Plymouth Rock leads his polygamous household to the Petunia bed as unconcernedly as though he possessed it by inheritance. Ah me! what an amount of digging that family is capable of doing when the ground has been broken. The graceful little Ham-

burgh escorts his harem daintily over the same ground whenever it suits his royal pleasure. Though his excavations are not as large or deep as those of his clumsy neighbor, yet he scratches so briskly as to cause equal destruction.

Jenny Dare may enlist the services of man, boy and dog to capture her one vagrant hen, she may call upon a weasel, or wish to mingle the perfume of a polecat with the odor of Mignonette in defense of her flowers, but such a course would not be admissible for me. I must drive them gently, and open wide the gate for their easy dispersion.

Now will anyone say that I do not cultivate flowers under difficulties, if, indeed, I cultivate them at all! I am obliged to confess that I am not a skilful, practical worker among them, as many correspondents of the *MAGAZINE* are. But a few good flowers for bouquets are as necessary to the happiness of farmers and poultry raisers, as the more fortunate ones who do not encounter "that hen"; hence, I persevere, and my efforts are often rewarded by some handsome annuals, which are the delight of the bouquet makers.—N., *West Oneonta, N. Y.*

GOLDEN-VEINED HONEYSUCKLE.

This beautiful little plant makes a fine, low shrub for the lawn. It is rather more inclined to become bushy than to climb, and if planted out without support it makes a pretty bush or clump not more than a foot and a half high. Its bright, variegated foliage makes it always attractive, even without flowers. The flowers are very fragrant, at first pure white, but becoming a pale straw color. It does not bloom as freely as some species of Honeysuckle, consequently, one is apt to prize highly the white, sweet-scented beauties when they appear.

CABBAGE WORMS.—Mr. S. M. G., Dixon, Ill., asks for information from any one in regard to this pest. I wish to say I tried lime-dust without any good effect, but hearing that flour was good, I tried it, getting the cheapest from the mills, and dusting the Cabbage in the morning while the dew was on. I succeeded in saving all I tried this experiment on—about four thousand.—P. C., *Sigourney, Iowa.*

EARLY SNOWBALL.

A variety of Cauliflower with this name has for a year or two past made its appearance in market much earlier than any other sort. It forms a small or medium sized, compact head; the foliage is comparatively narrow and pointed. The present illustration very fairly represents



it. This season it appeared on the table here, a melting and delicious vegetable, by the middle of June, being nearly a month earlier than any other early sort. The origin of this variety we have not yet been able to trace with absolute certainty, but expect in time to establish its identity with a well authenticated kind. It is certainly one of the most desirable and valuable varieties for the market or the private garden, since, by proper management, plants can be brought on that are ready for use nearly a month in advance of any other sort.

STRAWBERRY NOTES.

I planted, early last fall, pot plants of Bidwell on dark mellow loam. They made a very vigorous growth, and last spring there was a remarkable set of fruit, exceeding the Wilson in this respect. The berries grew fast and large, and I entertained high hopes of this new sort until they commenced to ripen, then it proved a failure; pints have been picked where pecks should have been. The trouble seemed to be irregularity in ripening, the base of the fruit becoming ripe before the point colored or ripened; by

the time the end was ripe the balance of the berry was withered and spoiled. A few berries ripened up perfectly and they were beautiful, being brilliant crimson, very large and of very fair quality. The fruit is too firm for table use, but this is a good fault for a market berry. I want to believe the fault is in my soil and not in the fruit. Should this be so, I think the Bidwell the coming market strawberry.

I am pleased with the fruit of the Longfellow. It is large, beautiful in color and shape, being very regular, and for a large berry good in quality. The plant is remarkably slender and delicate, though fairly vigorous. For the home garden I deem it well worth a trial.

The Warren is another large and handsome berry, and as good as any large fruit. I think well of it.

On my soil Cumberland Triumph makes, for home use, a very desirable berry. With me it is an abundant bearer of very large fruit. Its regular shape and great size make a handsome dish of berries. In quality it is about equal to most of the large fruited berries, rather weak in flavor, but this fault can be helped out by mixing Wilson, or some more acid fruit. My Cumberland vines have yielded as many quarts of fruit to the row as the Wilson. The berries are too tender and too light colored for market. The plants are very vigorous.—T. T. S., *Rochester, N. Y.*

THE RED-HEADED WOODPECKER.

In later years we don't care to do those things that in youth gave so much enjoyment to life. In the early youth of your correspondent, he felt great pride in being able to bring down a bird with a stone, and none presented a more shining mark for his ambition than the Red-headed Woodpecker, and, especially, as we had the excuse that he was doing much harm among the red, ripe cherries. We, boys, were not allowed guns to shoot birds, but still were allowed to drive them away from the cherries at the risk of their beautiful lives; for cherries and dollars had a beauty that outshone even the shining red head, pure white body, and black-bordered tail of the beautiful Woodpecker, whose habits of life and food we knew little of, except a chance ripe cherry. Little did we dream of the danger of ever losing this bird, or of his

value as a liveried police, standing guard even over the trees that bore the fruit, or the orchard, the lawn, the arbor and the forest.

But now, I have not seen one of those birds within ten miles of our home for at least the last ten years or more; not that we killed them off, but we have destroyed the old, ripe and decaying trees of the orchard and the forest, where the great balance of his food was to be found, and so he has gone west or south or north, wherever he can find his insect food, and where he may peck holes in hollow trees, wherein to build his nest and rear his young secure from persecution. We still have the Sap-sucker, as it is called, and the Speckled-breasted Flicker, both of which are good worm hunters. Yet in spite of these, within the last five years we have lost three fine, large Scotch Firs from being literally eaten up alive with the borers, though the bark was riddled full of holes by birds—the Sap-suckers—in search of the worms.—S. F. L., *Chel-sea, Del Co., Pa.*

WHITE PARTRIDGE BERRY.

Nearly every one is familiar with the modest little *Mitchella* repens as it appears throughout our woods in its usual costume of evergreen leaves and bright red berries, but I fancy that very few have ever been so fortunate as to discover a colony of the white fruited form. One day early last summer, my friend, Dr. MERCHANT, surprised me by bringing into my office a bunch of beautiful, waxy, white berries, whose structure and form clearly showed that they belonged to *Mitchella*. I at once became interested, and in a few days visited the place where they were found. The plants extended over a few square feet, and were covered with small flower buds, while several dozen berries, the remains of last year's crop, yet hung upon the vines. A few weeks later an examination of the flowers showed that they were all of one form—with exserted stamens and included stigmas. Late in the fall, there were a hundred or more fine, large white berries, with not a red one among them. At the present writing the plants are again in bud, and seem to exhibit the same structure as before; thus, for two years, at least, showing no tendency to either dimorphism or reversion of color. A

few plants potted late last fall and placed in a shaded window, have retained the berries up to near the present time, June 26th, and I see no reason why the white Squaw, or Chickadee, or Partridge Berry cannot be successfully cultivated.—C. A., *Moravia, N. Y.*

CHLOROPHYTUM.

Mrs. FRANK C. wishes to know if there is such a plant as the *Chlorophytum Star-tenbergium*. I have one about two years old. The plant belongs to the *Asparagus* section of the *Lily* family. It has graceful foliage, of a light green color, its flower stems are very strong and slender, one or two feet long, and bear small, pure white flowers, about as large as the *Othonna* blossoms. After the bloom is over the flower stems throw out young plants or offsets, and these again bear flowers, which in turn bear other offsets. A plant the age of mine is a perfect mass of threads and bright green tassels. In a greenhouse the little offsets form roots, and the plant propagates itself. It will endure all the dry air, dust, and other troubles of a living room, and will grow for years in the same basket; all it requires is to be let alone. It is one of the handsomest plants for a hanging basket I ever saw.—MRS. DANIEL MCCURDY, *Minneapolis, Minn.*

GÆTHE PLANT.

In reply to Mrs. Frank C.:

Different florists send out plants entirely distinct in character and growth under the above name. From one, we received an upright plant with thick, waxy leaves, 'scolloped' edge, which (the leaves) have the habit of throwing out new plants from the margin when pinned against the wall. Another florist sent us a plant with long, lily-like foliage, of a pale green color, with an immense mass of white, fleshy roots, of half-tuberous form. If any other florist has a Gæthe plant of a different growth, we would like to obtain it.—S. C.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The second volume of the Report for 1881 is at hand, containing much valuable matter, and which we shall probably have occasion to refer to hereafter. The Society is evidently in a flourishing condition.

THE HANSELL RASPBERRY.

A new variety of red Raspberry, originating in New Jersey, has been under culture several years, and has proved itself to be earlier than any other known, whether black, yellow, purple, or any other color; also, that it is hardy, of fine shape, good, bright red color, and so firm and well adapted to shipping, that it has been sent four hundred miles to market in good condition. This variety is an accidental seedling discovered a few years since on the fruit farm of the HANSELL Brothers, of Burlington County, and by them propagated and tested. Mr. J. T. LOVETT has the credit of bringing the fruit to public notice, and by his invitation a large number of fruit-growers from different parts of the country assembled on the Hansell farm on the twenty-seventh of June, saw the bushes laden with ripe fruit, and testified unanimously to the variety as now stated. It is to be known as the Hansell Raspberry.

VARIOUS INQUIRIES.

A St. John subscriber sends a specimen of plant for name. It is what is known in the trade lists as *Justicia carnea*, but more properly should be called, *Cyrtanthera carnea*.

Mrs. H. J. M., Aurora, Ind., has a Coral Tree which she wishes to learn how to manage. A leaf sent with the inquiry shows that *Erythina Crista-galli* is the plant spoken of. There is no better way to manage it than to plant it out in the garden in spring after frosts have passed; there it will grow and flower. In the fall it can be removed and taken to the cellar, and there be bedded in sand, and so wintered.

LE CLAIRE asks how old a Lemon tree must be from seed before it blooms. Usually Lemons and Oranges are eight to twelve years from seed before bearing in the citrus groves at the South. Plants kept in pots will bear sooner than in the open; this is the result of the dwarfing they receive by confinement of the roots. Occasional pinching of the young shoots while growing will tend to develop flower buds. Eight years may probably be taken as the average time required for blooming these plants in pots with the care that they ordinarily receive.

BLACK CURRANT BUSHES.

The *Journal of Horticulture* gives the following method of renewing the bushes of the Black Currant, which yields scantily after a few years of fruiting, as practiced in the gardens at Burghley, the seat of the Marquis of Exeter:

"The old Currant bushes are made young again, it would seem, by a very simple process. A certain number of them are cut down yearly, almost to the ground. They push strong growth, and in a year or two the inferior produce is replaced by splendid fruit. Some bushes that at a glance appear four or five years old are, perhaps, five times that age—perhaps more. If the ground is not dug but dressed with manure and soil annually, Black Currant bushes may be kept profitable for generations, as they bear cutting down about as well as Willows, and, like Willows, afterwards grow vigorously."

SHADED ASPARAGUS.

A novel experiment is being made in France by a market gardener upon an Asparagus bed. He covers the plants with boxes and hampers, and thus leaves them. One fact already learned is that, thus shaded, the plants produce stems that are handsomer and longer and tenderer than those grown in the ordinary way.

The experiment has not progressed sufficiently far to show whether the method is on the whole practicable and economical, but in regard to this we shall probably learn more hereafter.

SALT FOR WHITE WORMS.—In order to kill the white worms in plant boxes, I used about a teaspoonful of salt to each gallon of soil. I just sprinkled the salt on the surface, and then stirred it up well, and in a few days the worms were all gone, and I have not seen any since. I put salt around Geraniums, Fuchsias, Begonias and Parlor Ivy. I do not think the salt did them any harm. It is a very simple method, and easily practiced. I shall try it on Cabbage plants for cut worms.—Mrs. F. L.—*Nicolaus, Cal.*

CATALPA SPECIOSA.—This handsome ornamental tree came into bloom here July 10th, continuing a week in fine condition. Some large trees made a grand show.

"THAT COARSE WHITE THREAD."

Should "IGNORAMUS," who wrote in the June number, ever find her Geranium beds in early summer full of plants grown from cuttings taken from her winter bloomers before throwing them away, as well as those secured from the summer bloomers before the frost had killed them the autumn previous, and should she wish to secure a pleasing variety for the next winter, as regards color and general character, and, if she were not sure of the qualities of each, she would learn upon their first blooming what selections to make for her reserved forces; after which not a blossom would be allowed to appear until they had been potted for winter. For a while she could easily distinguish those chosen ones from the rest; but there comes a time with every house keeper when "things get mixed," and after an illness, or an absence, or a two days' rain she'll find that some of them have stolen a march on her, and are making ready for dress parade, and are already so large from continual repression that she is liable to mistake them for others near by of the same kind that have grown less because of their blooming, and may wish that she had marked them in some way to distinguish them quickly. To have done this she might have wired to them some shapely slips of wood with name thereon, florist fashion; or, she might have rushed for a spool of coarse, white thread, woman fashion, and tied a piece on the stalk of each. So much for that.

If "IGNORAMUS" has an eye to shapeliness she can utilize as cuttings any superfluous shoots that appear at any time of year, by putting them in the soil of the parent plant whether in-doors or out. Of course, the smoothly cut end is inserted in the earth two or three inches deep, according to the length of the slip, and the soil pressed firmly about the end with the fingers.

To protract the flowering season each truss must be removed as soon as it fades, because of the vitality that is absorbed in the maturing of seeds which hold the life of future plants. Herein lies the secret of the saying, "the more flowers you give away the more you'll have."

With the first hint of autumn frosts "IGNORAMUS" will have potted her reserves with their repressed vitality, and

then turning to her spent summer bloomers will have remembered that of some kinds there were several plants each, and but one or two of other favorite sorts, (every cutting from which she had meant to secure,) and finding a number just out of bloom in certain localities she is puzzled. The only Asa Gray, salmon colored, cannot be distinguished by its foliage from two others near it. "Somebody has surely smuggled the last trusses." So next year the finest plant of each color and kind is to be marked so that she can readily secure just what she wants and no more. These she may crowd in a long, narrow window box of rich earth and sand, and set in a cool window of the steamy kitchen, if she choose, and if kept from drying up or freezing they will be ready rooted and growing ready for their beds when the proper time comes.

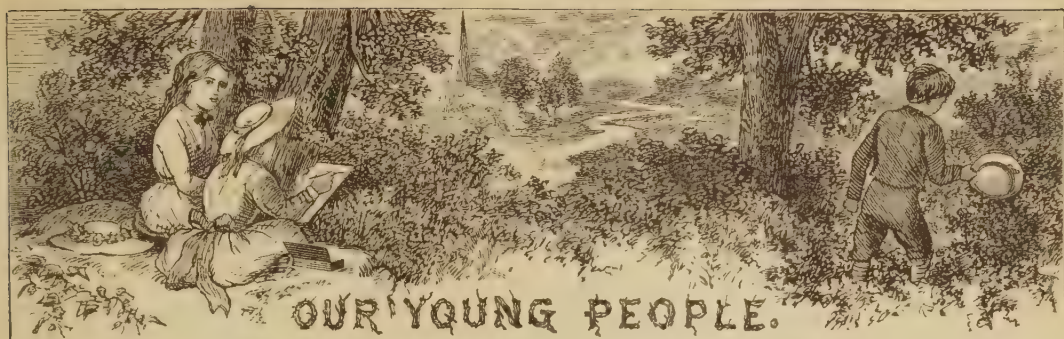
The details here given, which "IGNORAMUS," it is supposed, will experience during the near future, have been a reality in the past of one woman, who tested this rotation method of securing blooming Geraniums the year round in the rich dark earth of a valley in Southern Ohio. No reason is known why the same result may not be attained in any soil. If not rich enough it can be made so. However, it may be well to mention in these days of base (?) burners, that in the large sitting room where those winter bloomers were kept, there were two quarts of water regularly evaporated in twenty-four hours.

The enthusiasm of "IGNORAMUS" merited a response, as was evinced by Editor's reply which only touched, however, upon points less generally understood.—MRS. M. B. B., *Richmond, Ind.*

PRUNING AND PLANTING.

At what season shall I cut back Roses to make them more stocky or upright? Would you advise me to get hardy Climbers, such as Clematis or Wistaria in autumn, or next spring? Also, Pæonies and hardy Roses?—E. P. D., *Sheridan, Mich.*

Pruning or cutting back Roses closely in early spring will leave them in condition to make a few strong stems; pruning in summer has the tendency to develop numerous but feeble sprouts. It is much better, when convenient, to transplant Pæonies, Roses, Clematis, Wistaria, and other hardy, low plants in the fall than in the spring. They have time in the fall to repair much of the root damage attendant upon removal.



MRS. FRITZ.

On a certain morning, outside of Mrs. Fritz's gate stood two bright-looking girls whose steps had been arrested at sight of a Canary bird merrily singing inside of an old, rusty, wire rat-trap. The uncanny cage was hanging among clambering vines whose trailing ends sheltered his prison. The girls were cousins—Clara and Amy Strong. "Poor fellow!" said Amy, "if he could know how his home disgraces him he would never sing another note."

"Is it not strange," said Clara, "that Mrs Fritz has such a taste for birds and flowers and none at all for their surroundings? What do you suppose is underneath those plants banked up against her house on each side of that rickety doorstep?"

"Earth, of course."

"Not so much as you might suppose. I passed here, to and from my recitations, when she was building up those banks, and got an insight into the process. Next the steps you notice Madeira Vines that climb over the door; well, the tubers of those are in old nail kegs, and had grown a foot when she placed them there. Each way from those vines, and next the house you see Lemon Verbenas, Flowering Begonias, Glaucium, Cape Jasmine, Euonymus, Ivy-leaved Geraniums, and Wax Plants; the last two, as you see, supported by pieces of rough lath and tied with white cotton twine. The receptacles in which the roots of those plants repose form a medley that is rarely seen outside of a scavenger wagon. Among them I remember a piece of stove-pipe with a tin lid crowded in from the upper end to form a bottom, and a mammoth boot with the foot partly chopped off. She explained that 'ven the leathers dot rottens she should blant that poot een

von leetle parrel,' meaning a keg of earth, I suppose, for she went on to explain that when the leather decays, 'eet ish more petter ash anyding for dot roots.' There was also the upper half of an old churn, with the lid fastened in to form a bottom. The dasher is utilized yonder where you see that *Pilogyne* blowing about. The strings, you'll notice, are tied through the holes where cream is supposed to have once gushed through, but are now stuffed with small brush, which is nearly hidden by the vine.

"A tier lower down the banks you see Balsams, Mignonette, Salvias, Petunias, Jerusalem Cherry, Phlox, Verbenas, Pinks, Zinnias, and various Geraniums, all mixed up together. Lower still, and about the base, you notice *Farfugium*, *Peristrophe*, *Begonia Rex*, Sensitive Plant, *Coleus*, Ice Plants, *Portulaca*, Pansies, Sweet Alyssum and others. After the banks were thus arranged, she really did try to screen the first unsightliness of her trumpery by inserting here and there, long rooted stems of the Water Ivy and Wandering Jew, and she had numerous three-inch pots of Sedum and Rock Moss, which she stuck into spaces all about, until finally the banks grew to be what you see them. I reported progress from time to time to Professor Banning, to whom I recite, just to see him cough and spit in disgust; cross and uncross his legs; jump up and hunt for something he did not want, and sit down again and call her an old hag; or sometimes when I've taken some of her great luscious flowers to analyze for him, he'll ask sharply, 'Where'd you get those?' and then say, 'O, she's half witch.' You see, the Professor makes a specialty of plant culture himself to a certain extent, and it rasps him to the quick to know that when they

have plants that are alike, hers always excel.

"But yonder comes Mrs. Fritz around the corner, and with her the lovely little girl whom I have often seen here. That half-grown girl living with us has a sister of the same age, and she declares that this child was the means of reforming their father by some 'flower charm' or something—she hardly knew what. But it seems he had become such a victim of intemperance that his pride drove him among strangers, and then from sheer suffering and exposure he was driven toward home again, a broken down man; and having called at Mrs. Fielding's to get warm, this child reminded him of his own, and made such an impression upon him that he went to work and is now a very ——"

"Good mordings," broke from the jolly Mrs. Fritz, "haf you fright mine vlowers, v'ile I leefs dem von leetle meenite mit your crow-scare names teel der heads ees weelted mit der szhame? Valk een! valk een!"

"Thank you, we will," said Clara, "this is a cousin of mine visiting me, and she is very much interested in your flower garden. But first, will you not tell me the name of this little girl?"

"Goot Himmel! dot leetle girleen haf more names 'nough ash vould pe blenty for von beeg fam'lee. Von v'ile she vas Magpie, voteever dot ees; nodder v'ile, she vas Puttercub, voteever dot ees; and her gran'mutter calls her Ruth, und I calls her der pest name dot never vos made, und dot's Gretchen. Now valk 'round mit your vriend."

"Thanks, I will; how very large your Ricinus has grown—it is immense."

"Now v'ich is dot?" inquired Mrs. Fritz, planting herself erect with both hands on her hips. When it was pointed out she exclaimed, "O go 'longs mit you! efery pody vat knows nottings, knows dot's a Gastor Pean. The dirt vot I feeds mine garten dot more as mooch zense ash your pook-larnin."

"I expect so," said Clara, "but do you know that this long row of Hollyhocks and Sunflowers next the street are just in fashion?"

"Vashion nottings! Dot Brovessor, ven he goes py v'ile ago last year, he say, "More Cabbeege Mees Freetz? Hafs you eat up all dot odder crop?" So I

hides mine Cabbeedge; un now he bees mad at mine vlowers und he valks py on der oder side. Ha, ha, ha; I knows heem. V'en der girleens pring me Orange and Lemon zeeds, vot I plants vor leetle nosegays, vot lays py der blates at der gentry deeners, I geeves um posies; und I geeves der Brovessor's girleen der pest vons, so ash he can see. So next v'ile she say 'no, thanks you; we've dot vlowers blenty.' O, I knows, I knows," and off she waddled.

Then the girls sauntered around the bit of yard that had escaped the Cabbage patch and certainly admired the three stately rows of royal looking Cannas, Gladioli and Tuberoses that separated the two grounds. Little Buttercup was near enough to hear the admiring exclamations, and said timidly, "I know what makes her things grow so big. She thinks it's a secret, but Professor Banning says it's no secret at all."

"Well, then, tell us what it is," said Clara.

"Well, she has four barrels in that old shed with sand, and slacked lime, and ashes and charcoal in them. The charcoal and sand she mixes with the dirt for her pot plants, and uses the lime and ashes in a nasty pile of stuff she has over yonder in the corner. O, she puts every thing in it that she can rake and scrape—dead leaves and rotten Cabbage, and every woolen rag and stocking and old shoe she can find. She rolls them in the thick lime and then stuffs them in out of sight. One day she punched a big hole in the pile and poured in some lime, and then stuck in—oh—h—h—a dead cat, and covered it with lime. I haven't been near it since. Beside all this stuff, she puts bones into lye or something, and when they get soft she pounds and sifts them, and calls it bone-dust. In the winter she carries nearly all her plants up stairs into a big room, and stacks them up in a circle, and has a little fountain in the center."

"A fountain?"

"Yes, and she won't tell me where the water comes from, but says, 'O shild, shild, don't you know dot der vorld is full of vater?' When I am grown up I shall have a great many flowers and lots of Buttercups. Uncle Matt has made a bed for them, but"—then whispering—"I shall never use dead cats."

The girls had been suppressing their laughter as they listened to the charming child talking so wisely, but now were quite overcome by their merriment as they stooped and told her she was the dearest darling in the world, and shook and hugged her amid their laughter, until she laughed and wondered too, what it was all about. Then they told each other they should have to hasten away, though they were continually seeing something that arrested their attention in by-places and corners, as everywhere else. Finally, they encountered a couple of hanging baskets, last year's Gourds, so cut as to leave the handles on the remaining part, and the Oxalis and Kenilworth Ivy were flourishing as well as though in costly vases. Finally passing out the gate, Clara took a last look at the flower banks, and nudging Amy, remarked, "I see, Mrs. Fritz, that among your Phlox you have the real Radowitzii."

"O you go 'vay," she answered, "mit your beeg vords. You vitch mine flax mit your Red-vitch eye."

Then the girls said, "Good morning," just as they met Mrs. Fielding passing in the gate, where she found her "Ruth," and paused a moment to consult Mrs. Fritz.

"Friend Fritz," said she, "I think thee once told me that thy Passion vine has never been out of its box, although old and thrifty. Mine is younger, and yet the soil is completely filled with thread-like roots that lie on the surface. Would thee mind telling me how thee manages thine?"

"O lawks, I vill dells you. I joost puts on leetle easy hot vater, vot keells the fine roots. Ven dey rots, dey makes reech dirt."

"I fear the hot water would kill mine, entirely."

"Dot's vot the volks zay ven I dells 'em," she answered, well pleased, her brawny figure shaking with laughter. And thus we must leave her.—AUNT MARJORIE.

SOWING SEEDS OF PERENNIALS.—The latter part of this month is a good time to sow seeds of many kinds of Perennials. Prepare a small bed and sow seeds of the varieties you want, giving a little shade until the plants are up and able to bear the sun.

SQUAW-ROOT OR CANCER-ROOT.

I have been much interested in the various notes and queries relating to our native plants that have appeared from time to time in this MAGAZINE, and as it is proposed to illustrate some of our more common and beautiful flowers, I thought that by way of comparison, a figure and short sketch of one of our more curious and little known plants



CONOPHOLIS AMERICANA.

might not be devoid of interest. The plant to which I refer belongs to the natural order, Orobanchaceæ, a family of root-parasites, and is botanically known as *Conopholis Americana*. It is a queer-looking object, entirely destitute of green foliage, of a light brown or chestnut color throughout, and with its shining

imbricated scales and floral bracts, bears a strong resemblance to a small Pine cone. It is not a rare plant in certain localities, and some of your readers may have seen it growing in large clusters among the old leaves at the foot of Oak trees, on whose roots it is parasitic, its roots often blending so completely with its host that it is difficult to say just where the root ends and the plant begins. As the plant appropriates material already formed by the Oak roots, it contains a large amount of acrid, astringent matter, and a cut section of the fresh plant readily blackens on exposure to the air. The plant is known in some sections as Squaw or Cancer-root, and was at one time a fancied remedy for malignant growths. The figure shows a full-sized flowering plant, with a single, slightly enlarged ovary to the right.—C. A., *Moravia, N. Y.*

THE MARECHAL NEIL BUD.

Katie and May had quarreled; such friends as they were too, but Katie had told May she was "a mean little thing, and didn't know anything," and May had told her playmate that she was proud and hateful, and so the mischief was done. May went home crying to mamma, and saying she would never love Katie any more, she was so proud. Katie, knowing she was in the wrong, would not acknowledge it, and went into the garden, found a shady spot, and sobbed herself to sleep; and yet, their childish grief and pride were as real to them as our greater ones to us.

"Why, here is Miss Katie," cried out Mr. Sweet William, nodding his bright head at little Miss Candytuft.

"Yes," chimed in Feather Pink, "and she has been weeping."

"Do pray hush your noise," and the flowers laughed as they looked at little Marechal Neil. "Heigho," they whispered, "our noise has awakened Mr. Vanity," for so they called him.

What a collection was in that little garden! Violets nestled at the feet of purple Lilies, Feather Pinks and Sweet Williams chatted cosily, Candytuft, Verbenas, Heliotrope, and all were on the best terms, save Marechal Neil, and he scolded and fretted because he was in such company; Sweet William was his closest neighbor, and he teased him aw-

fully. "You are so old fashioned," Neil would say.

"Yes," Sweet William would answer, "so I am, but I am a great favorite for all that. Miss Katie's grown sister is going to send my first bud to a friend of hers, just as soon as it is large enough."

"By the time it gets there it will be withered. She had better send me; I won't get mashed so easily."

"You!" and Neil drew himself up looking oceans of contempt at Sweet William.

"Children," said little Heliotrope, "why don't you stop furring? For myself, I am sorry to leave my nice home,"—for little Heliotrope was going away also—and she sighed, filling the little garden with her fragrant breath.

"Where's our little Cloth of Gold?" asked Sweet William. You see, he was the tallest of the flowers, and did all the talking, nearly.

"Asleep, I guess," answered Scarlet Geranium, who was letting a tiny Morning Glory twine around his stalk. "No," spoke up Cloth of Gold, "I was only thinking."

"That's about all you do," said Feather Pink. "Why don't you grow like the rest of us?"

"I am so tired all the time, I will grow, by and by, when the sun gets warmer."

Then Heliotrope, who appeared to be peacemaker, spoke again: "Don't quarrel with Goldie; she can't help being tiny, and you should be kinder to her, and try and give her all the sun and the dew you can spare, and she drew aside a branch that was shadowing the little one.

"What do you suppose I heard?" said Feather Pink.

"What?" asked all the flowers, and Feather bent low, before he answered, that he might not be heard too far;

"Neil's bud has an ugly blight on it, and he has been so proud of it, and I know it will kill him, I know." Many were the Oh's and Ah's over this great piece of news.

"What are you saying?" asked Sweet William, but Feather only nodded his head sagaciously, sly fellow; he knew by William's crimsoning face he had best keep his remarks to himself. What a sensation the news created! Every one had something to say concerning it. Well, you know flowers love gossip as well as people, at least, some do.

"Serve him right," said Feather; he was so awfully proud," put in another; and so they kept on until there was quite a hubbub in the garden, while poor Neil sat unconscious of it all, so busily was he engaged talking to a butterfly who was hovering near.

"Well, children," said Heliotrope at last, when she could make herself heard, in her low, sweet voice, "You all know that Marechal Neil comes of a very old family that has always been noted for its beauty, so, you see, he has some excuse for his pride."

"Yes," put in Verbena, "but hence won't be so very proud."

"Well, you know we all have our faults."

"Not you, dear Heliotrope," said Winter Pink, "You haven't any fault to us, and you mustn't mind what our cousin Feather says." Heliotrope sighed again and the air was heavy as with sweet incense. She was nearest to Marechal Neil in the garden, and had a suspicion that Feather's words were true, but the tender-hearted little thing could

ish fellow, thought it was to seclude him from the rest of the flowers, and so had grown very haughty toward all, except Heliotrope, whose sweet life caused her to be loved by every one. Imagine, if you can, his consternation when, one morning, as Miss Lena was watering the flowers, she pulled up the sticks with the remark, "There! you ought to be strong enough to stand alone." Poor Neil! but that was nothing compared to the new



not bear the idea of Neil hearing the unpleasant remarks, nor his pain, should their surmises prove true, and she firmly resolved to stand by him through his trouble, and if possible, help him bear it. She well remembered when Neil first made his advent in the garden, how his proud ways had made him many enemies. Katie's sister, who had planted him, put a lot of tiny sticks around him to keep him from falling, he was such a tender, clinging creature then; he, fool-

trial, and Neil knew it, and strove to hide it by letting the bud rest so the blight was hidden. He had heard the flowers' remarks, and seen the glances thrown at him, and his heart swelled rebelliously, and he muttered "That hateful wind told them about it. I thought he was telling them something yesterday evening when he was whispering to them." And poor Neil was fit to cry with vexation. "I wish I had not been quite so proud with them, and I wish—"

"I wish May were here," sighed Katie, trying to get her eyes open. Her eyes opened at last, and rested then on the Marechal Neil, and, sure enough, there was the blight on the bud just as Katie saw it in her dream.

Was it a dream, little ones?—MAY.

MYSTERY OF A SEED.

I have a sort of reverence for seeds, because each tiny one has in it a little world of its own; and then the queer, mysterious little creatures put themselves into all fantastic shapes. The Four-o'clock looks like a bishop's mitre, and the Nasturtium is crimped up on all sides, and pungent to the taste, everybody has seen it. No two kinds of seeds are alike, and I dare say you know them all, and each peculiar shape. When I was a child, in England, I was very fond of rambling on my father's farm, and of sitting on a favorite stump where I could admire each particular tree. The Oak had no end of charm for me, and, in the autumn, the falling acorns filled me with an indescribable pleasure!

One old tree, said to be a thousand years old, I viewed with awe. The cup and saucer, as we children called the acorn, excited in my youthful mind a degree of wonder, which to this day I feel, that under its pretty graceful form it enclosed the germ of a mighty oak. I would take a small pen-knife and cut the acorn in two and gaze into its heart, vainly trying to solve the mystery. Men of science can tell us about its different stages of growth after the moist earth and the rains of heaven have acted upon the germ, and the mysterious growth has made its first appearance, but that is all they can do. Why it takes its peculiar shapes, or how that great, majestic tree lies hidden in the cup, none can tell us.

The Morning Glory seed, many sided as it is, who can be indifferent to, and help wondering at its hidden beauties? After the air and light and heat and water has moistened its seeds, how wondrous a wealth of beauty it unfolds! The very leaves have in them a richness of shape and color as they hang by their long petioles and sway in the breeze, seeming to say, "I will reveal only as much as I choose of the knowledge I possess."

I reverence the student; it is only right that he should find out all he can, I like

to do it myself, and when reaching the utmost limit of inquiry I find myself unable to pass a certain point, the feelings which I experienced in childhood come again. Even the tiniest flower, how eloquent it is of its Maker.—M. H. S.

PLANTS IN THEIR OWN WAY.

Some pretty vines that climb and droop in the embrasures of my room windows are beginning to obscure the light too much on cloudy days, and I have tried to vary their position while retaining their wanton grace. I can't do it. They know best themselves about all that. So do the plainest shrubs and the coarsest trees of the wild woods or meadows. Look at a clump any where that has never been touched by knife or ax, or hand of man, or mouth of browsing ox, and every line and leaf is beautiful. "Who can paint like nature?" asks that charming poet, THOMSON. The question has been quoted hundreds of times since he penned it, and respectful silence has been the only answer. So it would be if the question were, "who can pose like nature?"

The English style of garden arrangement became famous, because while the continental gardeners clipped every tree and every shrub into trim artificial forms, making them all look like rows of peas, English gardeners seldom indulged in topiary work, or stiff, straight line arrangement, but gave their plants full spread, and every visitor saw that they were, "when unadorned, adorned the most," comparing with the results of the painful, never-completed work of the continental trimmers much as a rugged, hearty, handsome man does with a stiffly starched and close brushed dandy, just out of the hands of the tailor and the barber.

But we are obliged often in our limited home grounds to prune, and restrain, and cut away, and re-arrange branches or sprays that have been smothered or over crowded, or broken down from weak growth or by rough treatment. In doing this we succeed in proportion as we follow nature, studying the natural habit of each tree and plant that we arrange, and following its own best working, so that when we leave it no wounds or distortions or marks of violence, or of crowding are seen, but all the growth stands or spreads in natural, elegant array.—W.

